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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,838	12/19/2001	Satyabrata Raychaudhuri	SBE-78886	5466

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EXAMINER

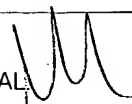
O MALLEY, KATHRYN S

ART UNIT PAPER NUMBER

3749

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/024,838	Applicant(s) RAYCHAUDHURI ET AL 	
	Examiner Kathryn S. O'Malley	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's argument that Biallas et al. does not teach sequentially exposing discrete segments of the coated substrate to the heat pattern has been considered but is moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 6, 8-11, 13, 15, 16, 18-25, 27-29, 32, and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biallas et al. (US Patent 5,888,592) in view of Novotny et al. (US Patent 4,143,468).
4. Biallas et al. teaches a curing apparatus, method of its use, and product formed comprising supporting structure 6 for transferring a coating sample 7 to sequentially expose the samples to curing by infrared emitters 3 and gas nozzles 13 configured to generate a predetermined heat pattern at selected positions and for a selected duration of time. Note column 3, line 50- column 4, line 25 and Figures 1 and 2. Biallas et al. does not teach sequentially exposing discrete segments of the coated substrate to the heat pattern. Novotny et al. teaches a similar curing method and apparatus that exposes discrete segments of substrate 10 to radiation from source 50. Note column 4, lines 52-62. As

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Novotny et al. teaches that exposing discrete segments to heat will prevent damage to the substrate, it would have been obvious to one of ordinary skill in the art to modify the curing method and apparatus of Biallas et al. with the exposure element and method step of Novotny et al. Regarding claims 2, 4, 8, 10, 11, 18, 21, 23, 27, and 34-36, while Biallas et al., as modified by Novotny et al., does not teach the ranges presently claimed, such ranges would have been obvious to one of ordinary skill in the art since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

5. Claims 7, 17, 26, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biallas et al. in view of Novotny et al. as applied to claims 1 and 19 above, and further in view of Pikus (US Patent 6,125,549).

6. Biallas et al., as modified by Novotny et al., does not teach providing steam along with heated gas. Pikus teaches a similar drying method and apparatus utilizing a combination of infrared, gas, and steam emitters. Note column 3, lines 35-49; column 6, lines 13-16; and Figure 1. As Pikus teaches that the addition of steam to a drying method and apparatus enhances heat transfer to material that is being dried, it would have been obvious to one of ordinary skill in the art to modify the apparatus and method of Biallas et al., as modified by Novotny et al., with the steam emitters of Pikus.

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7. Claims 14, 30, 31, 37, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biallas et al. in view of Novotny et al. as applied to claims 1 and 19 above, and further in view of Chen et al. (US Patent 5,856,018).

8. Bialles et al., as modified by Novotny et al., does not teach treating specific substrate materials or repeating the curing process to form multi-layered anti-reflection coating. Chen et al. teaches a similar process for curing comprising treating polymethyl methacrylate with sequential curing treatments to result in a multi-layered coating. Note column 2, lines 6-14. As Chen et al. teaches that a multi-layered coating formed from multiple curing steps results in enhanced brightness and contrast while reducing expense and susceptibility to damage, it would have been obvious to one of ordinary skill in the art to modify the curing method and apparatus of Biallas et al., as modified by Novotny et al., with the multiple curing steps of Chen et al.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Biallas et al. in view of Novotny et al. as applied to claim 1 above, and further in view of Tate (US Patent 5,319,861).

10. Biallas et al., as modified by Novotny et al., does not teach two infrared lamps placed opposite each other. Tate teaches a similar coating apparatus comprising infrared lamps 16 placed on opposite sides of each other to direct radiation at coated workpieces 100. Note column 10, lines 30-34 and Figures 18 and 19. As Tate teaches that infrared lamps on both sides of a workpiece will result in more uniform curing, it would have been obvious to one of ordinary skill

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in the art to modify the curing apparatus and method of Biallas et al., as modified by Novotny et al., with the opposite-facing infrared lamps of Tate.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

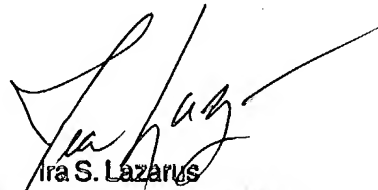
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathryn S. O'Malley whose telephone number is (703)308-2844. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on (703)308-1935. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KSO



Ira S. Lazarus  
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Group 3700